

REMARKS

Claims 2-9, 41, 43-54, 68, 69, 79 and 80 are pending in this matter. Claims 43 and 69 are independent claims.

By non-final Office Action mailed October 18, 2007, the Examiner objected to claims 2-9, 41, 44-54, 58-68 and 69-77 because of an informality; rejected claims 69-77 under Section 101 as directed to non-statutory subject matter; and rejected claims 2-9, 41, 43-54, and 57-77 under Section 103(a) as being unpatentable over Gray et al. (US 6,557,754) in view of Cagliostro (US 5,500,517).

In response, claims 2-9, 41, 43-54, 68 and 69 have been amended, and claims 78 and 79 have been added. Claims 57-67, and 70-77 have been canceled.

I. Claim Objections

The Examiner objected to claims 2-9, 41, 44-54, 58-68 and 69-77 because of the informality: the phrase "An integrated circuit card interface device" should read "The integrated circuit card interface device." This correction was made to claims 2-9, 41, 44-54 and 68. No correction was made to claim 69, as the indicated phrase is not present in that independent claim.

II. Claim Rejections – 35 USC § 101

The Examiner rejected claims 69-77 under Section 101 as directed to non-statutory subject matter as software per se. The Examiner asserts that the claims recite a "device" in the preamble only, while the body of the claims merely contain software components. The Examiner suggests amending to limit the claims to statutory subject matter.

Applicant disagrees, and points out that the claim is drafted in means plus function form, and as such refers to the structure in the specification. Nevertheless, in order to advance prosecution claim 69 has been amended to clarify that it claims statutory subject matter, consistent with the amendment to claim 43 and Section

112, par. 6, as follows. Also to advance prosecution, claims 70-77 have been canceled.

69. A portable integrated circuit card interface device, comprising:

~~means for operably connecting the interface device to an integrated circuit card to enable communication between the interface device and the integrated circuit card;~~

~~means for operably connecting the interface device to a host device to enable communication between the interface device and the host device;~~

~~means for operating the interface device in a standalone mode in which the interface device is not operably connected to a host device to enable communication between the interface device and the host device;~~

~~means for operating the interface device in a connected mode in which the interface device is operably connected to a host device to enable communication between the interface device and the host device.~~

an application memory;

an application engine for managing one or more applications in said application memory;

an input/output module;

a host interface;

one or more integrated circuit card interfaces;

means for operation without external power;

means for a standalone mode of operation in which the interface device is not operably connected to a host device via the host interface, and

means for a reprogramming mode of operation for adding, modifying, or deleting programs from the interface device.

III. Claim Rejections – 35 USC § 103(a)

The Examiner has rejected claims 2-9, 41, 43-54, and 57-77 under 35 U.S.C. 103(a), on new grounds of rejection, as being unpatentable over Gray et al (US 6,557,754) in view of Cagliostro (US 5,500,517). In response, Applicants have amended claim 43, and canceled claims 57-67. As amended, claim 43 combines the limitations of claim 57, and the presence of an internal power supply, and now reads:

43. An integrated circuit card interface device comprising:

an application memory;

an application engine for managing one or more applications in said application memory;

an input/output module;

a host interface; ~~and~~

one or more integrated circuit card interfaces; and

an internal power supply;

wherein the interface device is adapted to enable operation in accordance with multiple modes of operation comprising

a standalone mode of operation, in which the interface device is not operably connected to a host device via the host interface, and

a reprogramming mode of operation, in which the interface device is operably connected to an integrated circuit via one of the one or more integrated circuit card interfaces, and/or to a host device via the host

interface to enable one or more programs to be added to, modified in, or deleted from, the interface device.

Since the limitations of claim 57 have been incorporated with claim 43, claims 58-67 have been canceled as duplicates. As so amended, independent claim 43 defines the invention clearly, distinctly, unambiguously, and together with its dependent claims is now in condition for allowance.

As explained in the Specification, the problem with the prior art falls into three categories. The first category are devices which are intended to be used in a portable or standalone manner, but:

“Once a device in this group has been built, the internal application cannot be modified to support any new requirements or new smart cards.” p. 1, 29-31.

A second category of prior art devices includes those designed to be connected to a host, but which do not offer any portable or standalone application capability. p. 2, ll. 4-6. In the third category are those devices which are reprogrammable, but do not have multiple modes of operation. p. 2, ll. 7-9.

As we will now explain, the Gray et al device has all of the defects of the prior art: (a) its internal applications cannot be modified to support any new requirements or new smart cards, (b) it is designed to be connected to a host, and does not offer standalone application capability, (c) it is not portable, and (d) it does not have multiple modes of operation.

A. Gray et al Do Not Teach a Reprogramming Mode

With respect to claim 57, the Examiner finds a programming mode in Gray where “ROM 42a includes firmware which the processor 40 executes for operation of the card reader 20 and for monitoring data and/or commands from the computer.” (emphasis added) c.4, ll. 13-32.

With due respect, Applicants' urge the Examiner to note that the quoted text says nothing about **reprogramming** and that in fact the use of **ROM rather than EPROM** shows that Gray et al did not intend for the firmware 42a to be reprogrammed. ROM is generally understood in the art (and so acknowledged in Gray) as read only memory whose contents can be accessed and read but cannot be changed, *e.g.*, once it is fixed it cannot be **reprogrammed**. For example as defined in the Cambridge Dictionary of Science and Technology (1988):

ROM (*Comp.*) *Read Only Memory*. Computer memory which may not be written to by the programmer. The software in the ROM is fixed during manufacture. See PROM. p. 773.

The other part of memory 42 in Gray et al comprises RAM 42b "used as a temporary buffer for data inputs and outputs." c.4, ll. 40-41. Such volatile memory would not be suitable for storage of programs. Reference is made to other machine readable mediums, ("memory module 42 may also include . . ." c. 4, ll. 18-20) but without explanation as to its purpose, and with no mention of reprogrammability. Other embodiments of programs are noted, but only as present in the non-reprogrammable ROM memory ("ROM 42a also includes firmware for: . . ." c.4, l. 42).

Gray et al do not teach or fairly suggest a reprogramming mode. If anything, Gray et al teach away from a reprogramming mode. Since the device is always connected to a host, there is no need to reprogram the device, and commands and data received from the host are relayed to the smart card (*e.g.*, c. 15, ll. 43-45).

B. The Gray Device Cannot Operate in Standalone Mode

The Examiner states that all limitations of claim 43 are taught by Gray et al, except that "Gray does not specifically teach a standalone mode of operation in which the interface device is not operably connected (to a host device.)" Significantly, the Examiner asserts that:

"With all these components, the card reader 20 **could operate** in a

‘standalone mode’ (without connecting to a host device), to read and/or write data to/from the card 30.” (emphasis added)

Respectfully, that is not the case. It lacks an internal power supply (required in amended claim 43) and the purpose of the Gray device is clearly to operate in a single connected mode with a host. ***There would be no purpose or utility in using the Gray device in standalone mode.*** The Gray system, shown in Fig. 1A, consists of a host computer (12, 14, 16) coupled to a card reader/writer (20, 22, 24) to facilitate communication with a card 30. This coupled operation for communication of data to the card is maintained in every figure and flowchart in Gray et al.

It therefore teaches away from a standalone disconnected mode, or use as a portable device. As such, combining Gray et al with ***any*** standalone device (such as Cagliostro) would not have been obvious to a person of ordinary skill in the art at the time the invention was made.

Nevertheless, Gray et al, even when combined with Cagliostro, does not teach a standalone mode ***as part of a multi-mode interface***, combined with a reprogramming mode, with all of the limitations of claim 43. Cagliostro teaches a “collection device to be connected between an off-line smart cart [sic] reader/writer terminal and a PCMCIA card.” (Summary). The invention is intended to be operated as “an offline data transfer device” (c. 1., ll. 44-45) for an immobile remote device, such as a parking meter, a vending machine, or other point of sale terminal, which is not connected to a central computer ***for data exchange with that computer***. In other words, its purpose and utility is to act as a replacement for the cord connecting the reader 20 with the computer 12 in Fig. 1A of Gray et al.

The Patent and Trademark Office has issued “Examination Guidelines for Determining Obviousness under 35 U.S.C. 103 in view of the Supreme Court’s decision in *KSR International Co. v. Teleflex*,” Federal Register, Vol. 72, No. 195, 57526. The guidelines emphasize that, when considering obviousness of a combination of known elements, the operative question is “whether the

improvement is more than the predictable use of prior art elements according to their established functions.” 82 USPQ2d at 1396.

In this case, the use of Cagliostro’s prior art elements in a predictable manner mandates the inclusion of a PCMCIA or similar interface as a transfer device in Applicants’ invention. This limitation does not apply to applicant’s invention. Applicant has disclosed improved means of interfacing in a standalone mode with a smart card, without relying on PCMCIA cards to provide any part of the functionality. Thus, applicant’s device is an alternative solution with the potential of being smaller, cheaper, more portable, and more rugged than a PCMCIA-based device. As such, Applicant has provided improvement that is more than the predictable use of prior art elements according to their established functions.

Further, neither Gray nor Cogliostro teach subjecting reprogramming to security verification. New claim 78 is drawn to this, and is supported by the Specification, p. 18, l. 18 through p. 20, l. 20.

C. The Gray Device is Not Portable

The Examiner states, with regard to claim 41, that Gray teaches a portable integrated circuit card interface device, referencing c.3, ll. 44-61. Respectfully, neither that citation, nor any other part of Gray teaches a portable device. Perhaps the Examiner was referring to the obvious ability to **turn off** the device and move it to another location. But that is a not the same as a handheld device intended for portable applications **while turned on**. The specification, for example, calls for a battery and a resident battery-monitoring application, implying that the device may be portably used in places where there is no access to power. Gray’s device requires power from and a connection to a host device to access a smart card; it is not in that sense portable. Applicant’s device, on the other hand, retains full functionality without external power and without connection to an external host -- it remains fully functional as a standalone smart card controller while remaining portable.

Gray et al teaches away from use of an internal power supply. The described embodiments all rely upon the computer for power:

"The keyboard 16 is coupled to the computer 12, which supplies current and voltage to the keyboard 16 and the card reader 20."
c.3, ll. 51-52.

New claim 79 is drawn to the ability to operate the device while being carried by a user, and support is found in the Specification, *inter alia*, at p. 3, ll. 1-11.

D. Gray et al Do Not Teach Multiple Modes of Operation

The Examiner finds the limitation of "wherein the interface device is adapted to enable operation in accordance with multiple modes of operation" in Gray et al in the reader interface circuit, which is "operable in two **communication** modes." (emphasis added). Respectfully, the Examiner has misunderstood the modes of operation of the present invention. Here, the modes are **modes of operation**, *e.g.*, a standalone mode and a programming mode, and in dependent claims 46-49 a connected mode, and not modes of communication. These modes are simply not present in Gray et al.

CONCLUSION

Applicant believes that all pending claims are allowable and a Notice of Allowance is respectfully requested. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is cordially invited to telephone the undersigned counsel at the number set out below.

No fee is believed due for the two new dependent claims, as other dependent claims have been canceled.

A three month extension has been requested. The Commissioner is authorized to charge the fee for that extension and any additional fee due to Deposit Account No. 19-2090.

Respectfully submitted,
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